Network-based testing toolkit training modules

Module 4: Operational considerations
and tips for implementing network-based
testing

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Learning objectives

By the end of this training, participants will be able to:

- Describe the who, when, and where of network-based testing services

- Discuss the human resources necessary to offer network-based testing services

- Discuss the importance of ensuring effective linkage to prevention and care services as part of NBT services

- Describe how to ensure that NBT continues for all positive contacts

- Describe strategies for protecting the safety of network-based testing providers

- Demonstrate an understanding of updated counseling messages to use during network-based testing counseling sessions

- Describe 5 tips for improving elicitation and brief motivational interviewing techniques

Consideration 1.

Who, what, when, where, how, and how much of network-based testing services

WHO

Who performs NBT services?
- Public or community health workers
- Peer educators or lay providers
- Testing providers

Who benefits from NBT services?
- Which clients
- Which partners, contacts, & family members

WHAT

What services are offered?
- Demand generation
- Active notification
- HIV, hepatitis B, hepatitis C, and/or STI testing
- Linkage to or provision of prevention or treatment
- Vaccination
- Social support or other services

WHEN

When is a client offered NBT services?
- At diagnosis
- During routine follow-ups

How often should NBT services be performed?
- Yield of recurrent NBT services
- Partner service fatigue

Network-Based Testing Services Implementation Questions

WHERE

Do outcomes differ by location?
- Facility-based
- Community-based
- Virtual
- Private sector, pharmacies
- Homes

HOW

What approaches work best for which populations?
- Phone calls
- In-person tracing
- Virtual interventions
- Other modalities

HOW MUCH

What are the costs of NBT services?
- Overall costs
- Incremental & opportunity costs
- Cost-effectiveness

Do costs differ between NBT service delivery modalities, populations, or pathogens?

Who should be offered network-based testing services?

- Adults and adolescents with **HIV** should be offered **partner services, testing of children, and social network testing**

- Adults and adolescents with **another STI** should be offered partner services. In some cases, social network testing or secondary distribution of self-tests can be considered (syphilis).

- Adults and adolescents with **hepatitis B** should be offered partner services, family and household testing

- Adults and adolescents with **hepatitis C** should be offered self-test kits for secondary distribution. Partner services can also be considered.

- Adults and adolescents at risk of HIV or another STI should be offered **social network testing even if they are negative**

Types of network-based testing

	HIV	HBV	HCV	STIs
Partner Services	WHO recommended(1)	WHO recommended(2)	Some evidence	WHO recommended(3)
Social network testing services	WHO recommended			Some evidence
Family & household testing services	WHO recommended (biological children)(1)	WHO recommended (family & household)(2)		
Secondary distribution of self-testing kits	WHO recommended(1)		Some evidence	WHO recommended (syphilis)(3)*

1. Consolidated Guidelines on Differentiated HIV Testing Services, 2024: https://www.who.int/publications/i/item/9789240096394

2. Guidelines on HBV and HCV Testing, 2017: https://www.who.int/publications/i/item/9789241549981

3. Updated recommendations for the treatment of Neisseria gonorrhoeae, Chlamydia trachomatis, and Treponema pallidum (syphilis) and new recommendations on syphilis testing and partner services, 2024: https://www.who.int/publications/i/item/9789240090767

*Not widely available

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Who should conduct network-based testing services?

- Partner services & family/household testing services:

  o **Trained healthcare providers**/testers should conduct partner, family, and household testing services

  o **Peer educators or navigators** may assist with services in locating and contacting partners, family, and household members

- Social network testing

  o **Peer educators or navigators** can act as test promoters or can identify test promotors

  o **Community health workers** or others can also identify or act as test promoters

What services should be offered in integrated network-based testing?

- Consider the capacity of the systems supporting network-based testing in your setting, including follow-up testing for hepatitis B, hepatitis C, and certain STIs.

- Consider the epidemiology of different infections affecting the populations you are engaging.

- Linkage to treatment must be offered with any testing services

- In addition to notification and testing services, consider offering the following, based on availability and local guidance:
  - Prevention services (condoms, lubricants, VMMC, HIV PrEP and PEP, hepatitis B vaccination)
  - Linkage to other health services (family planning, mental health and substance dependence, noncommunicable disease services)
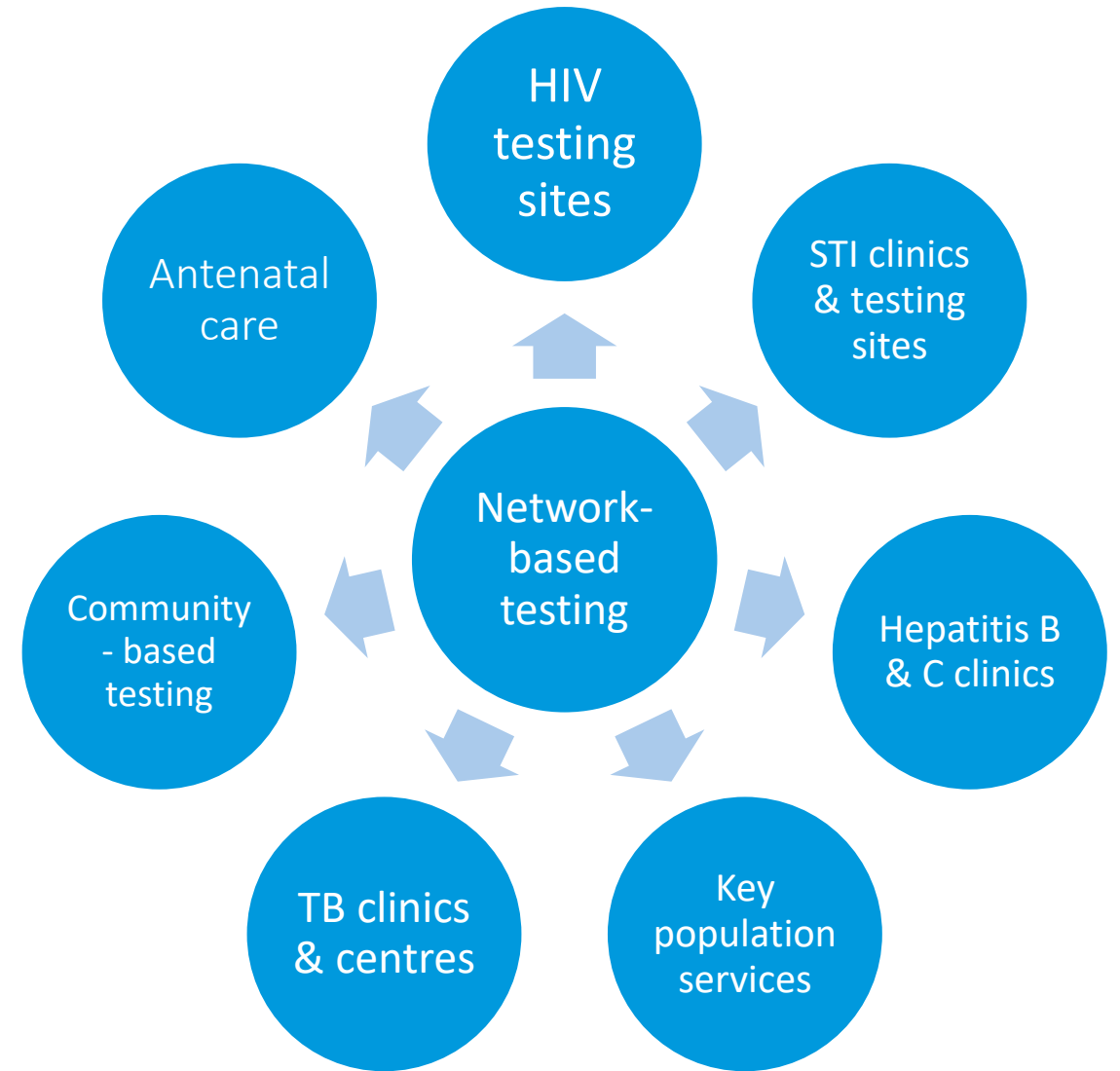 - Linkage to social support services

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When should these services be offered?

- Introduce basic network-based testing services concepts and benefits at pre-test information or post-test counseling session

- Partner elicitation and testing is **NOT** a one-time event but should be offered continually:
  - Soon after diagnosis
  - On a regular basis if on ongoing treatment (HIV, HBV, HCV)
  - If a client living with HIV develops a detectable HIV viral load
  - If the client has an incomplete 'family tree' (e.g., the status of their spouse and/or biological children <19 years is unknown)

Where should NBT services be offered?:

- At all facility-based HIV, hepatitis, and STI testing service delivery points (e.g., co-located VCT, SRH, ANC, TB, etc.)
- At all facility-based HIV, hepatitis, and STI treatment sites (e.g., KP programmes, SRH, PMTCT, ART, etc.)
- As part of all community-based HIV, hepatitis, and STI testing or treatment programs (e.g., mobile, workplace, KP drop-in centers/one stop shops, etc.)

How should network-based testing services be delivered?

Options for conducting network-based testing include:

- Phone calls to partners, family, and/or household members
- In-person tracing
- Virtual applications, including leveraging existing dating apps
- Secondary distribution of self-testing kits (HIV, HCV, syphilis)
- Community-based (testing parties, etc.)

Costs and cost efficiency in network-based testing:

- Consider using community health workers and/or peers to conduct components of network-based testing
- Integrate network-based testing with other services

Consideration 2.

Ensuring proper human resources to implement network-based testing services

What are human resource considerations for network-based testing services?

- Network-based testing services require trained personnel and resources to conduct interviews, notify partners/children, offer testing, and link all newly diagnosed partners/children to treatment and high-risk negative contacts to prevention services.

- Programs may need to assign **dedicated** network-based testing providers who have these responsibilities included in their job descriptions and who are evaluated on their performance eliciting and contacting exposed partners, children, household members, and other contacts.

- Where human resources are constrained, consider secondary distribution of self-test kits to offset the burden on staff

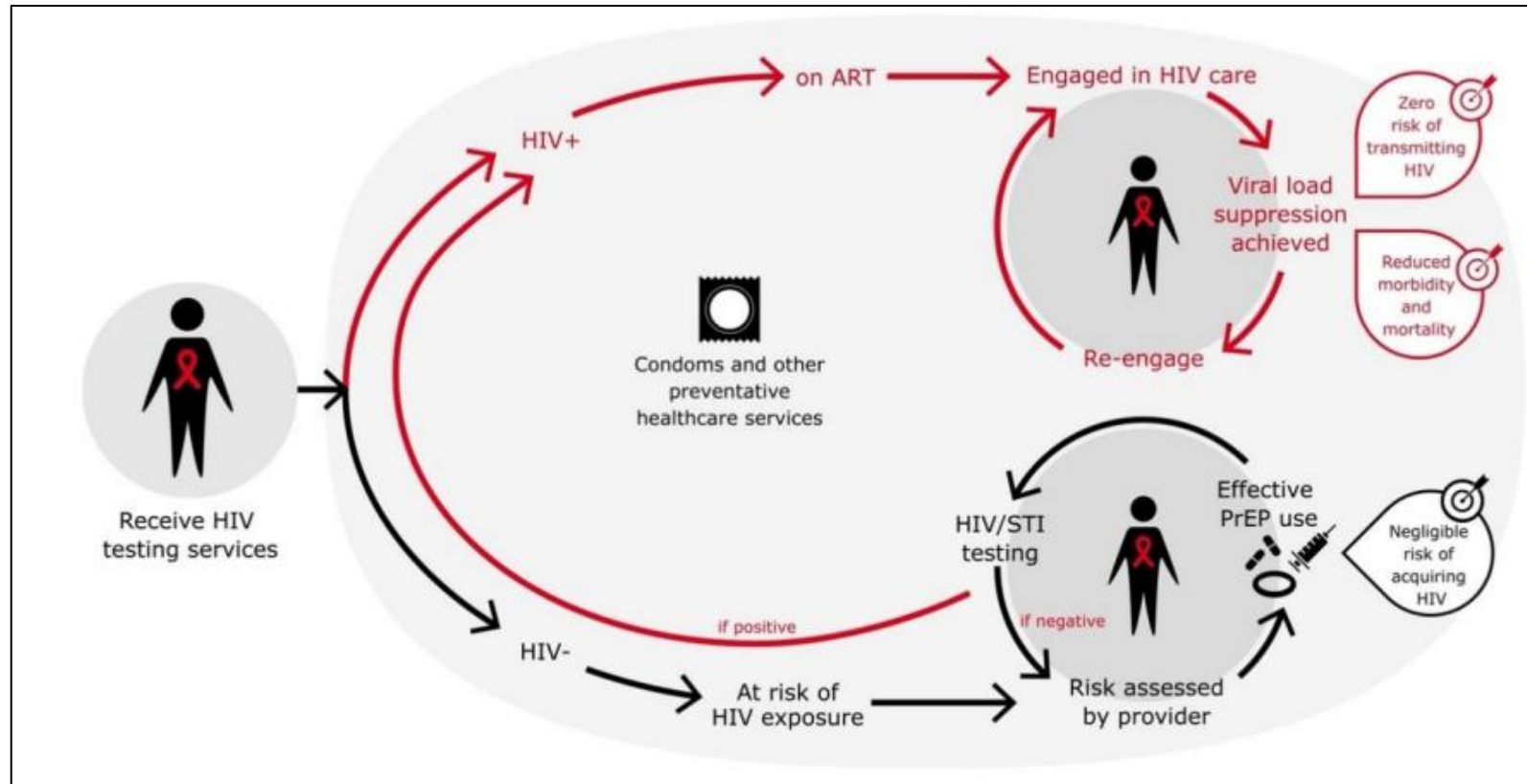# Estimating the additional resources required for conducting network-based testing services

Questions to consider:

- What infections will testing be offered for (HIV, hepatitis B, hepatitis C, other STIs)?

- What is the number of clients expected to be approached for network-based testing each month or year?

- What is the average number of partners, family members, and other contacts elicited per index client?

- What is the proportion of elicited partners, children, household members, and other contacts who are of unknown status eligible for testing?

- What tools and options are available for conducting network-based testing while minimizing the burden on the healthcare workforce? These may include secondary distribution of self-test kits, use of virtual tools, or task sharing by engaging lay providers to assist with NBT services.

Consideration 3.

Network-based testing should include linkage to prevention and treatment services

Network-based testing aims to break the chain of transmission
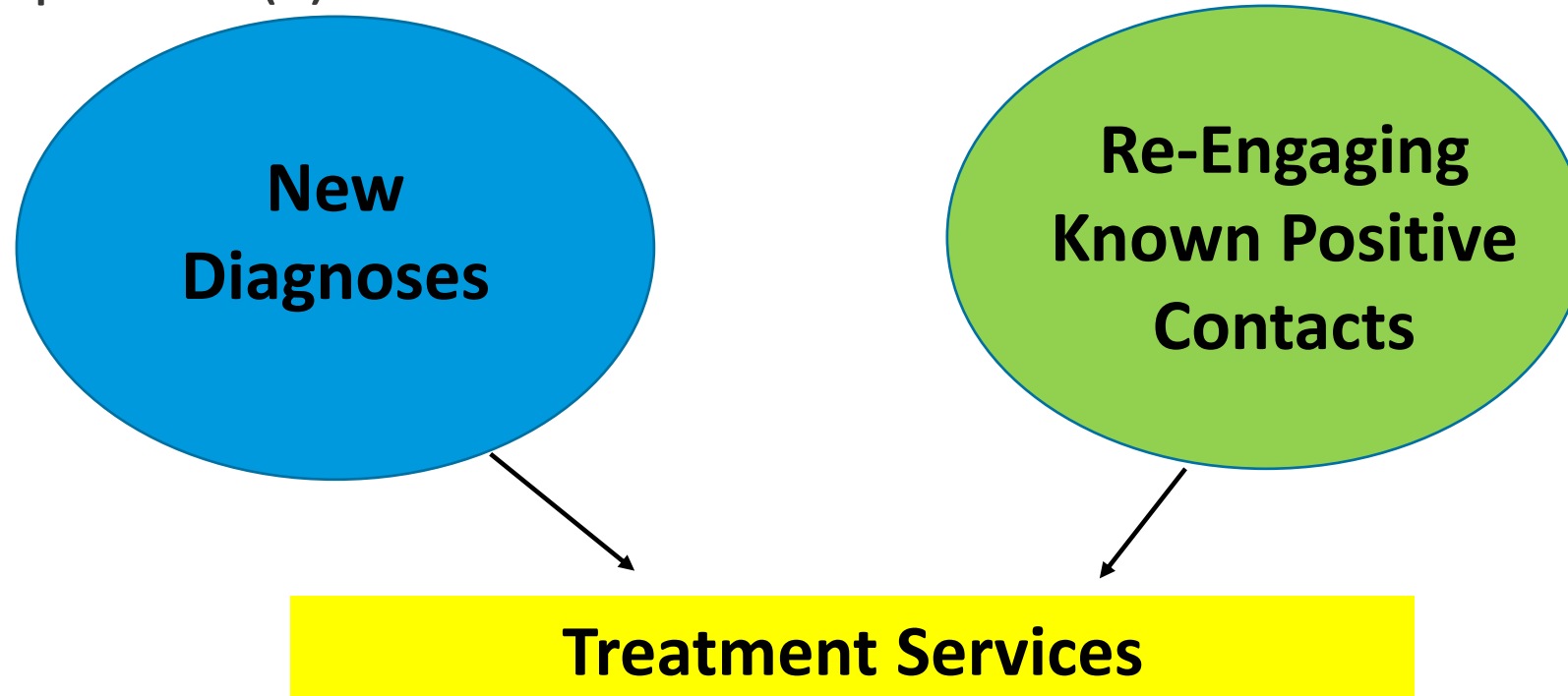

Network-based testing is centered on supporting the contact's needs through timely linkage to person-centered treatment, care, and/or prevention services

- Network-based testing often results in contacting people who already knew their status
- Network-based testing programs should have SOPs in place to re-engage contacted partner(s) who know their status **and who are not** currently in care

New Diagnoses

Re-Engaging Known Positive Contacts

Treatment Services

Monitor re-engagement in care

- Programs should track how many known positive contacts, not receiving treatment services, are successfully re-engaged in treatment
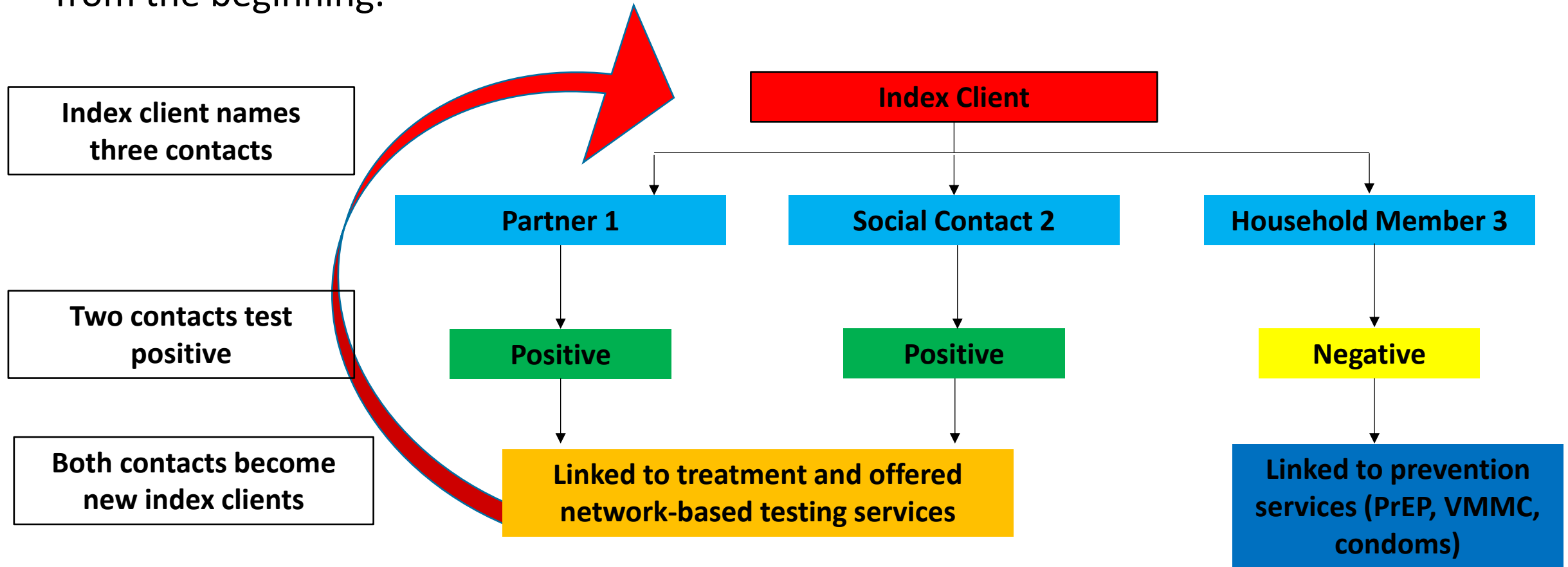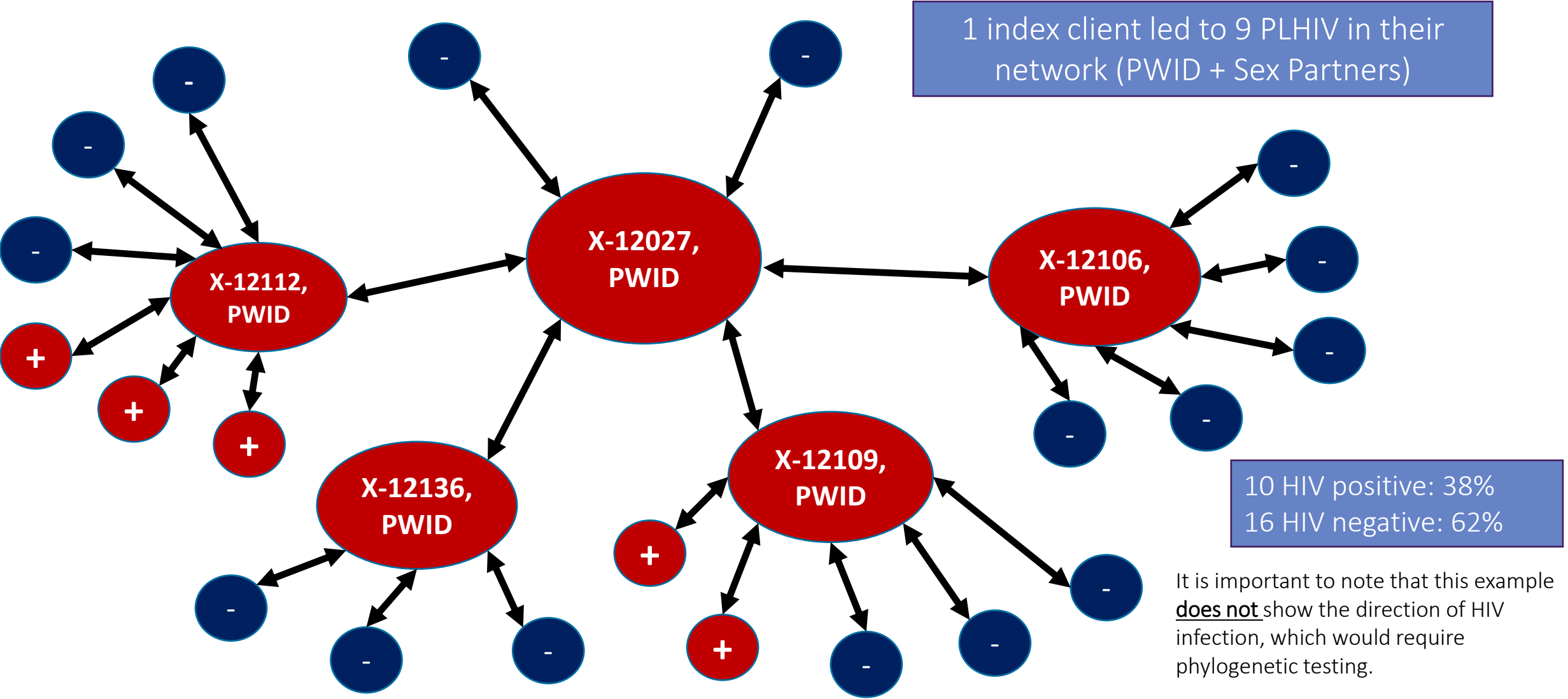
Consideration 4.

Offer network-based testing to all positive contacts, re-starting the contact cycle

- When a partner is diagnosed, they becomes a **new index client**, and the process starts over from the beginning.

Index client names three contacts

Two contacts test positive

Both contacts become new index clients

Index Client

Partner 1 → **Positive** → **Linked to treatment and offered network-based testing services**

Social Contact 2 → **Positive**

Household Member 3 → **Negative** → **Linked to prevention services (PrEP, VMMC, condoms)**

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Network-based testing helped to establish an active HIV transmission cluster in Vietnam

1 index client led to 9 PLHIV in their network (PWID + Sex Partners)

10 HIV positive: 38%
16 HIV negative: 62%

It is important to note that this example does not show the direction of HIV infection, which would require phylogenetic testing.

Consideration 5.

Provide information on importance of testing for multiple infections

Positive messaging for HIV, hepatitis B, hepatitis C, and other STIs

- **HIV**: treatable, excellent new drugs, viral suppression results in inability to transmit to partners through sex

- **Hepatitis B**: preventable with vaccines, treatable with daily medication

- **Hepatitis C**: curable with highly tolerable 8-12 week course of oral medication

- **Other STIs**: many are curable, some are preventable with vaccines (HPV)

Provide messaging on viral suppression for HIV

- Treatment has prevention benefits for partners, children and communities by reducing transmission. A person who is virally suppressed cannot transmit HIV to others through sex.

- Sample message:

  "This is a time of new hope: with ART, people living with HIV can live healthy lives and protect their loved ones."

Consideration 6.

Maintaining the safety of network-based testing service providers

Strategies for maintaining the safety and security of network-based testing providers

- Obtain government support and backing for testing services (e.g., circulars, guidelines)

- Ensure testing providers receive the training and supportive supervision they need to safely implement these services

- Provide community education on the importance and availability of partner, family, household, and/or social network testing to increase community's awareness of these services

- For safety reasons, network-based testing providers should travel in pairs for home visits (if possible, one male and one female provider) and carry proper identification

- During home visits, providers should dress in normal street clothes and avoid carrying branded backpacks to help protect the confidentiality of the person being contacted

Network testing provider self-care is crucially important

- Network-based testing can be an emotionally draining activity.

- Taking care of yourself is an essential part of taking care of others.

- Remember the healthier the tree, the better the fruit it can offer.

- If you don't take care of your mental health, you may burn out or have difficulty coping with the pressures of conducting network-based testing.

Tips for Taking Care of Yourself
RESOURCES FOR HEALTH CARE WORKERS

Watch for signs of burnout and stress
Signs can range from poor hygiene; depression; irritability; fatigue; and frustration, to more serious signs of being worried too much or easily startled, and having nightmares.

Make time to unwind
Take time every day to do things you enjoy.

Get support from team members
Set up a buddy system for staff to share concerns, talk about stress, watch over each other's safety and well-being, and to check that personal protective equipment is used the right way.

Stay connected to others, safely
Use technology to talk with friends, family, and colleagues. Share your experiences. Actively listen to others.

Ask for help when you need it
You may feel anxious, bored, angry, or lonely. Call the National Suicide Prevention Lifeline at 800-273-TALK (800-273-8255) or your local crisis response team at if you feel you want to hurt yourself or others.

Develop healthy ways to cope with stress
Take breaks from work, eat healthy foods, exercise, and socialize with friends and family. Do not use drugs and alcohol as a way to cope.

Limit your news and social media time
Repeated reports and posts about the pandemic can be upsetting. Take breaks.

Take care of your body
Eat healthy, do some type of regular exercise, and get enough sleep.

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Discussion Question

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What other suggestions do you have for maintaining the health, safety, and security of network-based testing providers?

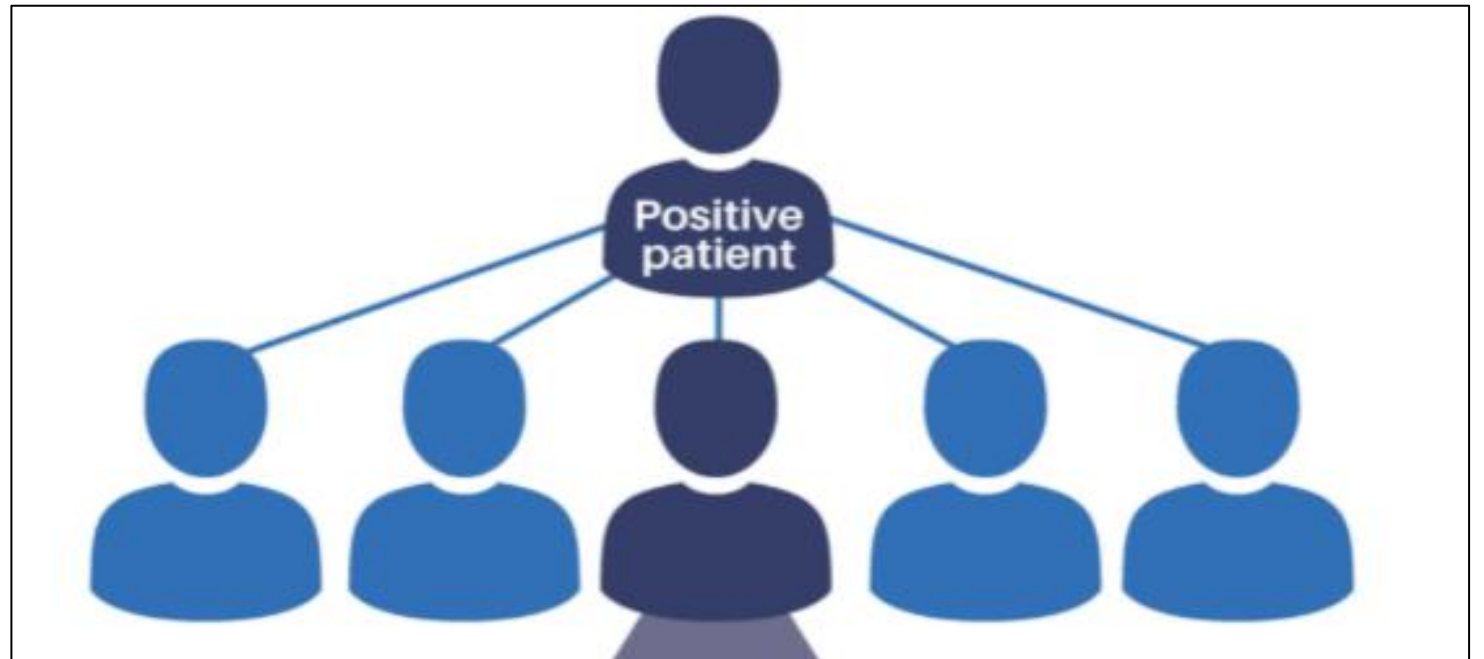# Summary of the 6 operational considerations for implementing NBT Services

- **Consideration 1:** Determine the who, what, when, and where, how, and how much of network-based testing services

- **Consideration 2:** Ensure proper human resources to implement network-based testing

- **Consideration 3:** Network-based testing should include linkage to prevention and testing services

- **Consideration 4:** Offer network-based testing to all positive contacts, re-starting the contact cycle

- **Consideration 5:** Provide information on importance of testing for multiple infections

- **Consideration 6:** Maintain the safety of network-based testing providers

Tips to improve elicitation in network-based testing
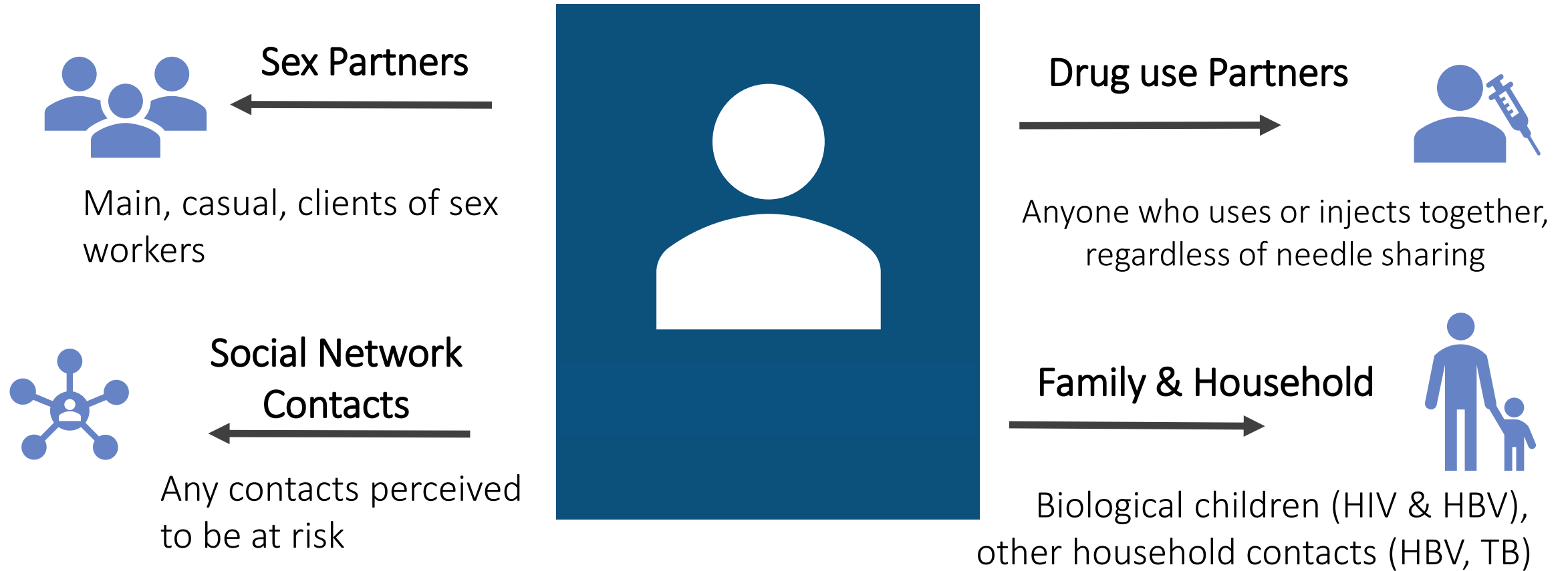
What is elicitation?

Elicitation = process of asking an index client to think of and name their sexual and injection partners, household contacts, children, and other contacts who are:

1. at risk of HIV, hepatitis B or C, or STIs

2. in need of testing

Elicitation is key to network-based testing success

Testing based on social connections

Sex Partners

Main, casual, clients of sex workers

Drug use Partners

Anyone who uses or injects together, regardless of needle sharing

Social Network Contacts

Any contacts perceived to be at risk

Family & Household

Biological children (HIV & HBV), other household contacts (HBV, TB)

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Poll

? What is one challenge that you have faced (or are concerned that you will face) when eliciting the contacts of index clients?
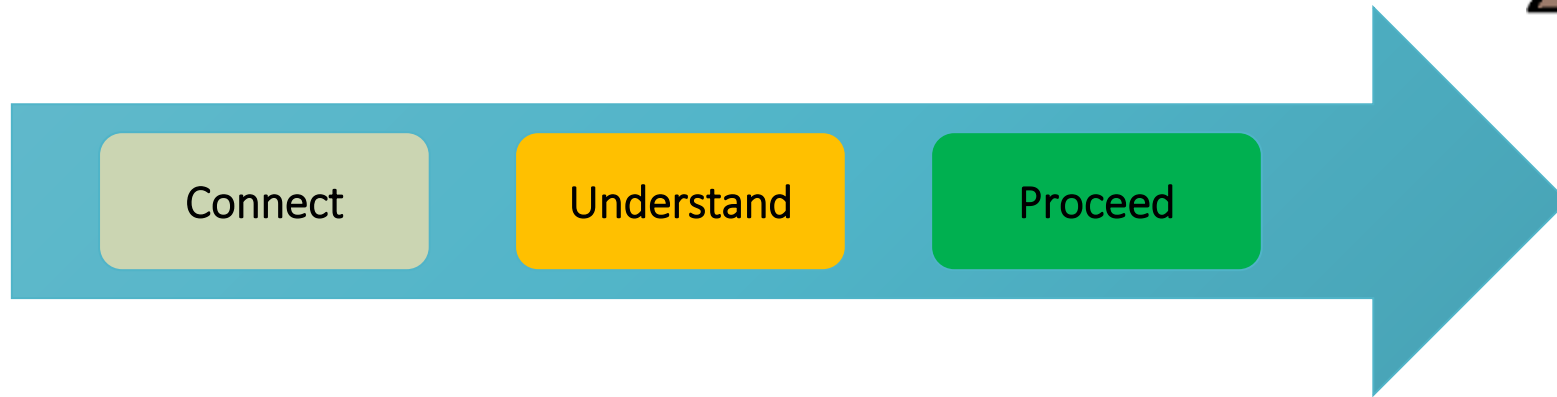
Five tips for improving elicitation

1. Provide person-centered care and counseling

2. Assure clients of the confidentiality of services

3. Use appropriate questions to ask about partner(s), children, and other contacts

4. Use appropriate humor, slang, and normalizing language to make clients laugh and feel comfortable with you

5. Use brief motivational interviewing to identify and address client's concerns around network-based testing and partner notification

Tip 1. Provide person-centered care and counseling

Tip 1. Provide person-centered care and counseling

- **Person-centered counseling** treats index clients with respect and dignity by assuming they are **an expert on their own life**.

- Person-centered counseling is **NOT** a lecture. Instead, the counselor uses active listening skills to understand the client and their story.

- The counselor does not judge the client but instead uses empathy to understand the challenges that the client is facing.

- The counselor presents the client with options and helps the client to choose the best option for their life circumstances.

Connect → Understand → Proceed

Person-centered counseling requires good communication skills

- Good communication depends on:
    1. Appropriate non-verbal messages
    2. Appropriate verbal messages
    3. Effective listening.

- Demonstrate professionalism

    - Sit with your body facing the client, and maintain good eye contact

    - Communicate a non-judgmental and objective stance about the client's behavior

    - Maintain professional boundaries with clients and their partners and contacts.

Knowledge Check

Why it is important to build rapport with the index client?

What best practices do you have for building rapport with your index clients?

Tip 2. Reassure clients of the confidentiality of network-based testing services

Tip 2. Reassure clients of the confidentiality of index testing services

- If clients don't trust that their information will remain confidential, they might not share the names of their partner(s), child(ren), and other contacts with us

- It is our duty to never reveal the information that clients tell us

- Both the confidentiality of the index client and all named partners, contacts, and children should be maintained at all times.

The partner's status should not be revealed to the index client

Unless Explicit Consent Is Obtained from All Parties

The identity of the index client should never be revealed to the partner unless agreed to by the index

Explain how you will protect the client's confidentiality

"We are committed to protecting your personal information. All the information you share with us will be kept in strict confidence. This means that we will not reveal your name to your partner(s) or other contacts. It also means that we will not be able to tell you whether your partner tested or his or her status, unless we get consent from both you and your partner(s). All information you provide us will be kept in locked cabinets, accessible only to health care workers and counselors providing network-based testing services."

Tip 3. Use appropriate questions to ask about the client's partner(s), children, household members, or social network contacts

Appropriate questions

Instead of…	Try…
Who have you had sex with in the past 3 years?	I want you to think back over the past 3 years, and try to share with me the names of as many sexual partners as you can remember.
Name your children.	How many children have you given birth to in your lifetime (women)? How many children do you have (men)?
Which of your friends needs to be tested?	Are there any other people you know who might be in need of testing?
Who do you inject drugs with?	Do you have any friends that you've injected with who might be in need of testing?

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Tip 4: Use appropriate humor, slang, and normalizing language to make clients laugh and feel comfortable with you
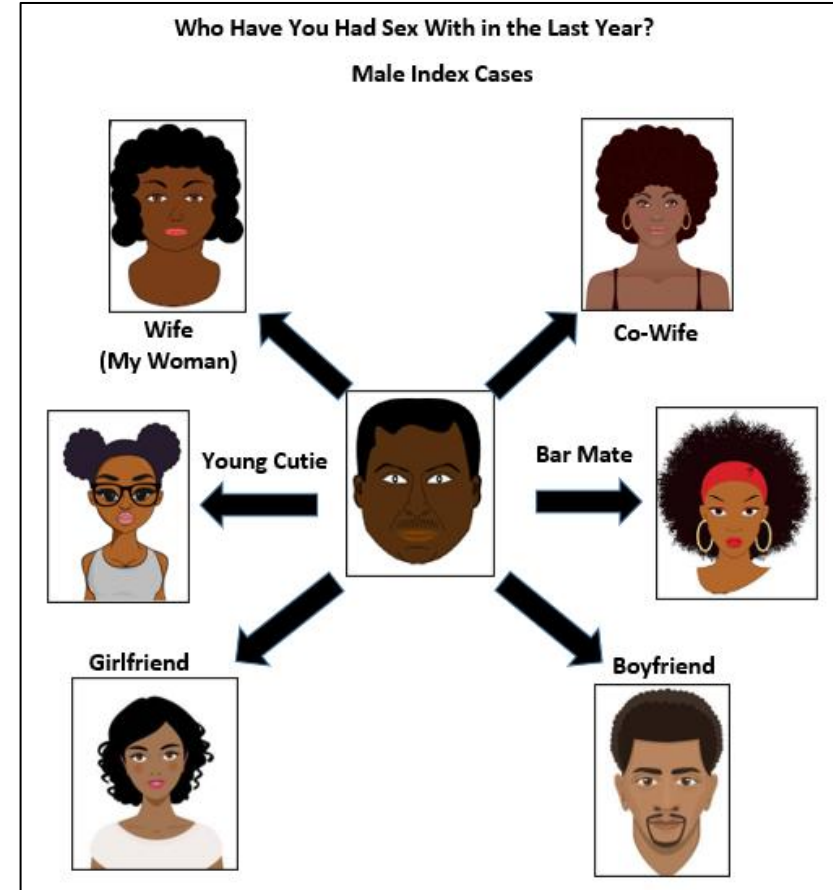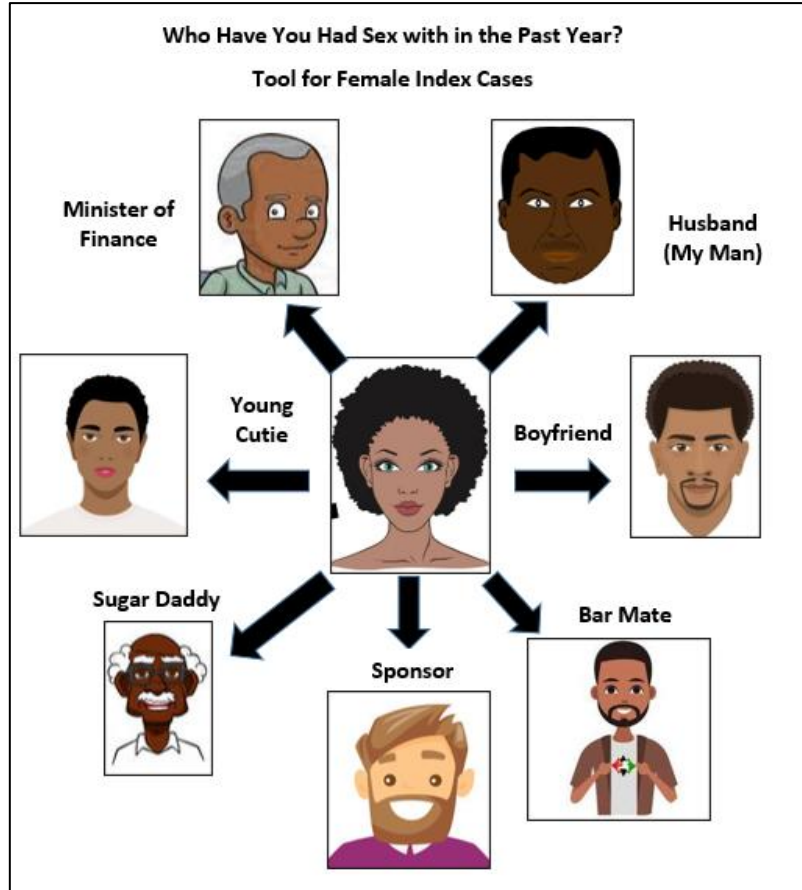
- You may want to start with a funny story normalizing the fact that many people have more than 1 sex partner.

  "Have you ever heard the story about the person who tried to sit on a one-legged chair? The chair wasn't stable, and they fell over into the fire. We, as humans, are kind of like that chair. We may need more than 1 sex partner for us to feel stable and happy. Maybe we have our main partner for raising our children together, another partner for money, and a third partner for love. In fact, having more than 1 sex partner is very common in some communities. I'm grateful that you shared the name of your main partner with me. I just want to make sure that you don't have any other partners that may need to be tested for syphilis. If so, I hope you will feel comfortable enough to share their names with me so we can offer them syphilis testing services."
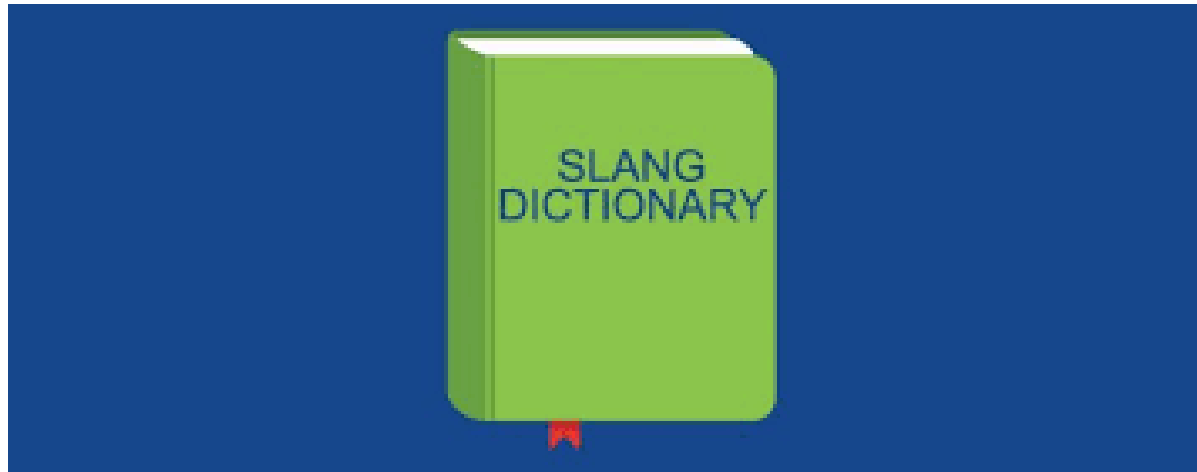
Use appropriate humor, slang, and normalizing language to make clients laugh and feel comfortable with you

- You can also prepare job aids with slang terms from your community to probe for different type of partners

Who Have You Had Sex with in the Past Year?
Tool for Female Index Cases

Minister of Finance — Husband (My Man) — Young Cutie — Boyfriend — Sugar Daddy — Sponsor — Bar Mate

Who Have You Had Sex With in the Last Year?
Male Index Cases

Wife (My Woman) — Co-Wife — Young Cutie — Bar Mate — Girlfriend — Boyfriend

Activity: What are the slang terms used in your community?

- Take 5 minutes with the person sitting next to you to think of all the slang terms you can for the female partners of male clients

- Don't forget about slang for same sex partners

- Now, think of slang terms for the male partners of female clients and write them on a separate set of sticky notes. Again, don't forget about slang for same sex partners

Tip 5. Use brief motivational interviewing to identify and address client's concerns around network-based testing

What is brief motivational interviewing?

- A person-centered counseling style for eliciting behavior change
- Assumes *client* knows what their barriers are to changing their behavior
- Counselors' role is to help client identify these issues and develop a plan to address
- Creates a cognitive dissonance (or discrepancy) between where **one is** and where **one wants to be**

OARS Strategy

Open-ended questions

"*What concerns do you have about notifying partners and social contacts about testing?*

Affirming statements

"*Many people aren't quite sure how to tell their partner they may have been exposed, especially partners you may not speak to anymore…*"

Reflective listening

"*It sounds like you are not sure how to inform partners, family members, and social contacts about the need to get tested….*"

Summarize the conversation

"*To review, I will call your partner, John, to notify him of his chlamydia exposure. You will also tell your other partner, Sam, of your diagnosis and his exposure. I am here if you need me, and if you change your mind about telling Sam, I can notify him as well.*"

Additional tips for elicitation

- Consider creating an anonymous "drop box" where clients can place the names and phone numbers of their contacts

- Use "Expert Elicitors" to train and mentor new counselors through "shadowing"

- Conduct supportive supervision & mentoring, including observing the elicitation interview

- Conduct "case conferences" (also known as "chalk talks") to provide counselors the opportunity to learn from each other

- Refer to partners as 'contacts' or 'individuals' since 'partner' implies a more committed/regular relationship

- If you're working with PWID, ask about 'sexual and injecting partners' together. Injecting partners have similar risks as sexual partners, even if they have not shared needles.

Knowledge Check

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What other elicitation strategies have you used?

Now, it's your turn!

- Please read each of the following scenarios and think about how you would approach this situation.

- How would you elicit the client's partner(s) (both sex and injecting), social network contacts, and family and household members?

- What services would you offer to the index client and partners, family members, and other contacts?

And now it's your turn!

Scenario 1

Elizabeth is a 25-year-old woman who injects drugs and was diagnosed with hepatitis C two years ago. She comes to clinic after hearing that treatment for hepatitis C is now available. She has a boyfriend and works at a local bar. She injects drugs with her boyfriend, as well as several other friends. She also has a 2-year-old son and lives with her mother.

Scenario 2

Marlon is a 25-year-old man who has sex with men. He recently tested positive for syphilis. He reports that his friend, Mark, encouraged him to get tested for syphilis.

Scenario 3

John is a 40-year-old truck driver who tested positive for hepatitis B during an outreach program in the nearest town. He informs you that he lives with his girlfriend Grace and their two children, Harry and Lisa. He spends much of his time either travelling across the country or at Mary's club in the adjoining neighbourhood drinking and having a good time with his friends.
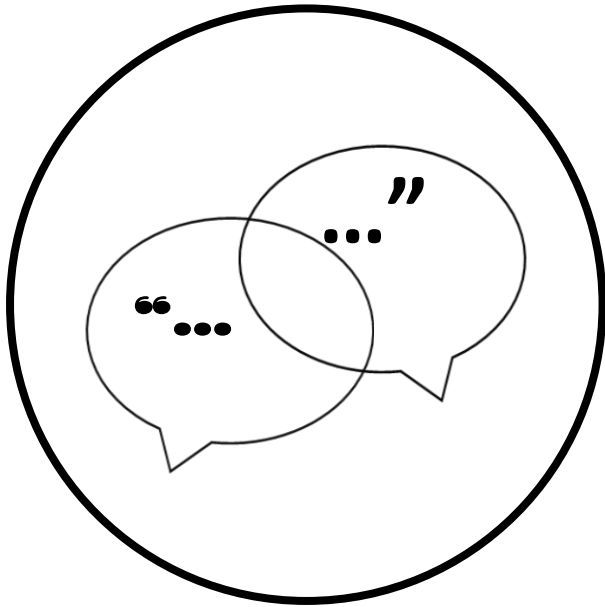
Scenario 4

Sarah recently tested HIV-positive. She tells you that she has had sex with two partners during the past year. She is willing to talk to you about notifying one partner but does not want to discuss the other at all because "he is married, and his wife is pregnant".
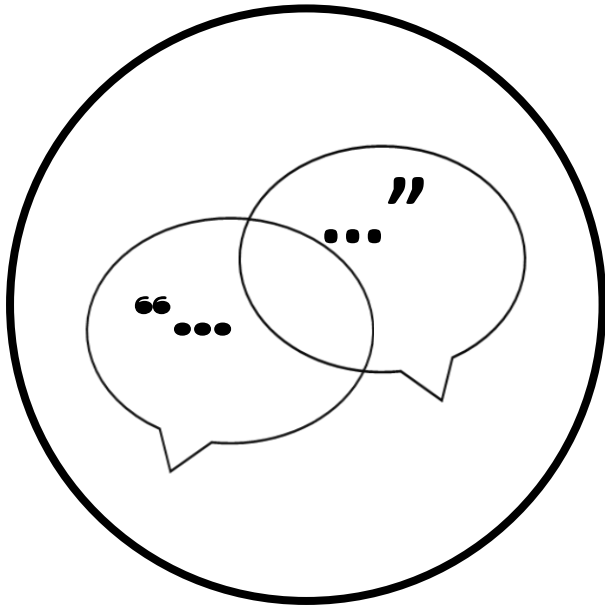
Discussion

1. Which contacts did you identify who may have been exposed?
2. Which infections should each contact be tested for?
3. Which additional infections, if any, should the index be tested for?
4. What challenges did you encounter during the interview?
5. How did you try to address those challenges?

Discussion

What elicitation strategy did you learn today that you plan to use in your counselling?